

Analysis of the Forehand Hit in field hockey

I will be describing the forehand hit in field hockey. This skill is used to move the ball quickly from one point on the field to the next. It is commonly used for passing, as well as a shooting on goal. The hit is similar to the baseball swing and to novice hockey players, unfortunately it looks more like a golf swing.

Phase 1: Starting position

Body is in the upright position with feet shoulder width apart, hands gripped around the top of the stick, or slightly chocked up, whichever you prefer (left hand on top). Arms are relaxed with natural flexion. Knees are at a 45-90 degree flexion. This should be a very balanced position. Head is up in preparation, then will be looking at ball the rest of the hit.



MUSCLE IDENTIFICATION:

- Palmer interossei- adducts hands around the stick
- Flexor digitorum profundus- flexes fingers around stick
- Flexor pollicis brevis- flexes thumb around stick
- Gracilis- adducts thigh and flexes knee

Phase 2: Backswing

As the stick is swung back, the RT arm will horizontally abduct, while increasing flexion and the RT scapula is retracting with slight elevation. At the same time the LT arm is horizontally adducting with slight extension and the LT scapula is protracting. Each shoulder is following the same pattern as the arms. Both wrists will increase flexion as the arms go back. LT wrist will flex while RT wrist is extending. There is a slight lateral flexion of the RT side while the torso is rotating around on the transverse axis towards the right. In the backswing,

weight will shift to the back leg. Here is where you can see differences amongst preference from athlete to athlete. Some athletes will have their feet farther apart than others. Personally, I like the shoulder width, or slightly more distance between the feet to give better balance and ball control for placement. The head will stay down, looking at the ball the duration of the hit.

MUSCLE IDENTIFICATION:

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- Brachialis- flexion of the LT and RT arm
- Triceps brachii- adducting left arm
- Serratus anterior- protracting LT scapula
- Trapezius- retracting RT scapula
- Flexor carpi radialis- flexes LT wrist
- Extensor carpi radialis longus- extends RT wrist
- Sternocleidomastoid- lateral flexion of RT torso

Phase 3: Downswing

The downswing is almost exactly opposite the backswing. Both arms will be transitioning from a bent, flexed position, to a straight, extended position. The LT arm is adducting while the RT arm is abducting. Leg flexion should stay the consistent from the start. This is where you see many hits go bad. Athletes will straighten their legs and pop their head up, causing inconsistencies and lose of control. Body weight will start to shift to the middle of the body. There will be eversion with the left leg and foot. This helps with direction of the ball. As the stick is coming down, both wrists will extend until there is no angle. RT hip is internally rotated while LT hip is externally rotated slightly.



MUSCLE IDENTIFICATION:

- Triceps brachii- extension of LT and RT arm
- Peroneus longus- eversion of LT foot
- Extensor carpi radialis longus- extension of RT and LT wrist
- Tensor fasciae latae- internal rotation of RT hip

- Gemellum superior- external rotation of LT hip

Phase 4: Contact with the ball

Wrists should be locked with zero flexion or extension, in a neutral position. Both arms should be almost straight, there will be a slight flexion in both of them so they are not rigid. Both legs should be flexed at same degree they started. If I were to critic the picture below, I would have this player keep both of her feet on the ground at this point of contact to create ultimate power. Body weight at time of contact with the ball should be directly in the center of your body. Great head positioning in this picture, down and directly over the ball. Slight lateral rotation to the RT and neck slightly flexed.



MUSCLE IDENTIFICATION:

- Brachialis- slight flexion of RT and LT arm
- Gracilis- adducts thigh and flexes knee
- Obliques- lateral rotation
- Longus capitis- neck flexion

Phase 5: Follow through

After making contact with the ball, the wrist will “break”, flex all the way. The LT arm will flex as much as needed, usually all the way, depending on the power generated in the hit, while abduction away from the body. The LT scapula will elevate while retracting. The RT arm will flex slightly to get around the body while adducting. There will be depression of the RT scapula as it protracts. The shoulder movement on the follow through will be on the LT a combination of horizontal abduction/abduction. On the RT it will be a combination of horizontal adduction/adduction. The LT leg should be bearing all the weight and have about a 90 degree flexion. The RT leg will be following the LT leg. It is in a relaxed position, partially flexed. The torso will be rotating around on the transverse axis towards the left.

MUSCLE IDENTIFICATION:

- Flexor carpi radialis- flexion of LT wrist
- Extensor carpi radialis longus- extension of RT wrist
- Brachialis- flexion of LT and RT arm
- Trapezius- elevate and retract LT scapula

- Levator scapulae- downward rotate RT scapula
- Gracilis- flexion of the LT knee
- Obliques- LT side for rotation